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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BENJAMIN DAVID FOSTER,
LEONARD ROBERT SPEISER,
LORI KATHLEEN STEWART,
ANDREW LEIGH SANDLER,
CHARLES ZORAN KALKO,
STERLING RYAN QUICK, and
ANNE CHANG RAIMONDI

Appeal 2008-004657
Application 10/689,970
Technology Center 3600

Decided: September 15, 2009

Before MURRIEL E. CRAWFORD, HUBERT C. LORIN, and
BIBHU R. MOHANTY, *Administrative Patent Judges*.

LORIN, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Benjamin David Foster, et al. (Appellants) seek our review under 35 U.S.C. § 134 of the final rejection of claims 1-30. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We AFFIRM-IN-PART¹ and enter a new ground under 37 C.F.R. §41.50(b).

THE INVENTION

This invention is a method that generates a recommended query by identifying a term in a user's search query and then runs the recommended query to identify listings which may be of interest to the user. *See* Specification [0005].

Claim 1, reproduced below, is illustrative of the subject matter on appeal.

1. A method of generating listing recommendations to a user of a network-based commerce system, the method including:
 identifying a term associated with a user interaction in the network-based commerce system, the identified term occurring within a search query;
 automatically generating a recommendation query including the identified term;

¹ Our decision will make reference to the Appellants' Appeal Brief ("App. Br.," filed Jul. 2, 2007) and Reply Brief ("Reply Br.," filed Dec. 6, 2007), and the Examiner's Answer ("Answer," mailed Oct. 2, 2007).

running the recommendation query against a plurality of listings of the network-based commerce system to identify at least one recommended listing; and

presenting the at least one recommended listing to a user of the network-based commerce system.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Ryan US 23003/0055831 A1 Mar. 20, 2003

Hirooka, Yasuo, et al., *Extending Content-Based recommendation by Order-Matching and Cross-Matching Methods*. Sep. 2000. pp. 177-190.

The following rejections are before us for review:

1. Claims 1, 10, 12, 21, 25, and 28 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention.
2. Claims 1, 2, 4-11, 21, and 23-30 are rejected under 35 U.S.C. §102(b) as being anticipated by Hirooka.
3. Claims 3, 12-20, and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hirooka and Ryan.

ISSUES

The issues are:

1. Are claims 1, 10, 21, 25, and 28 indefinite under 35 U.S.C. § 112, 2nd paragraph for failing to set forth the subject matter which the Appellants regard as their invention?
2. Have the Appellants shown that the Examiner erred in rejecting claim 12 under 35 U.S.C. § 112, 2nd paragraph for failing to set forth the subject matter which the Appellants regard as their invention?
3. Does Hirooka describe a method and a system that identifies a term associated with a user-interaction in the network-based commerce system, the identified term occurring within a search query and 2) automatically generates a recommended query including the identified term as recited in claims 1, 21, 25, and 28?

FINDINGS OF FACT

We find that the following enumerated findings of fact (FF) are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427 (Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

The scope and content of the prior art

Hirooka

1. Hirooka is a paper that describes TwinFinder, a recommender system for an on-line bookstore. Hirooka Abstract.

2. When discussing the existing category system at Skysof, the on-line bookstore, Hirooka states, “In the case of a customer who has an interest in several categories, it is easy to imagine that he or she uses different keywords to search in different book categories.” Hirooka §3.3.1.
 3. Hirooka does not describe that the customer’s keywords are included in a recommendation query that is automatically generated.
 4. When discussing the proposed TwinFinder system, Hirooka describes generating customer profiles having keyword vectors for each category the customer is interested in. Hirooka §3.3.1.
 5. Hirooka states, “[i]n TwinFinder, we generate a vector of keywords from titles, authors, synopses, and sub-categories of books purchased.” Hirooka §3.3.2.
- Ryan
6. The Examiner cited Ryan to teach viewing the plurality of listings and the identified term, providing a server, locating listing between popularity boundaries associated with a search term, and ranking the listings. Answer 7.

PRINCIPLES OF LAW

Definiteness

The test for compliance is “whether the claims do, in fact, set out and circumscribe a particular area with a reasonable degree of precision and particularity” when read in light of the “application disclosure as they would

be interpreted by one of ordinary skill in the art.” *In re Moore*, 439 F.2d 1232, 1235 (CCPA 1971).

Anticipation

““A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987).

Obviousness

Section 103 forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’

KSR Int’l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 550 U.S. at 407 (“While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls.”) The Court in *Graham* further noted that evidence of secondary considerations “might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.” *Graham*, 383 U.S. at 17-18.

ANALYSIS

The rejection of claims 1, 10, 12, 21, 25, and 28 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention.

Claims 1, 10, 21, 25, 28

The Examiner rejected claims 1, 10, 21, 25, and 28 under § 112, second paragraph for failing to particularly point out and distinctly claim the subject matter which the Appellants regard as the invention. Answer 4. The Examiner relies upon the Appellants' arguments in the Appellants' Response of October 16, 2006 [hereinafter, Response] as evidence that the Appellants' invention is different from what is claimed. *See* Answer 4-5 and 8-9. The Appellants' respond, that the Examiner has misconstrued the Appellants' argument in their Response. Reply Br. 4.

The Examiner is correct that 35 U.S.C. 112, 2nd paragraph requires that a claim recites the subject matter which the Appellants regard as their invention.

As an initial matter, we note that for a claim to comply with section 112, paragraph 2, it must satisfy two requirements: first, it must set forth what "the applicant regards as his invention," and second, it must do so with sufficient particularity and distinctness, *i.e.*, the claim must be sufficiently "definite." *See* 35 U.S.C. § 112, ¶ 2; *see also* Irah H. Donner, *Patent Prosecution* ch. 9.VIII, at 933 (2d ed.1999).

Solomon v. Kimberly-Clark Corp., 216 F.3d 1372, 1377 (Fed. Cir. 2000). However, we agree with the Appellants that Appellants' arguments traversing a §102 and §103 rejection in the Response do not establish that the claims do not set forth what the Appellants regard as the invention. Reply Br. 4. These arguments recite the claim limitations and assert that

Hirooka does not describe these limitations. *See* Response 8-11.

Accordingly, we find that the Appellants have shown that the Examiner erred in rejecting claims 1, 10, 21, 25, and 28 under § 112, second paragraph.

Claim 12

The Examiner rejected claim 12 under § 112, second paragraph because “the claim does not particularly point out and distinctly claim whether the listings are hosted by the network between popularity boundaries or whether the popularity boundaries are derived as a result of their association with the identified term.” Answer 4. In the Appeal Brief, the Appellants asserted that claim 12 was amended to remove the ambiguity asserted in this rejection. App. Br. 12. However, in the Reply Brief, the Appellants admit that claim 12 was not amended and merely make perfunctory arguments that claim 12 conforms to the requirements of §112, second paragraph. Reply Br. 5. Accordingly, we find that the Appellants have not shown that the Examiner erred in rejecting claim 12 under 35 U.S.C. § 112, second paragraph for failing to set forth the subject matter which the Appellants regards as their invention.

The rejection of claims 1, 2, 4-11, 21, and 23-30 under §102(b) as being anticipated by Hirooka.

Claims 1-20 and 29-30

The Appellants argue that Hirooka does not describe “identifying a term associated with a user interaction in the network based commerce system, the identified term occurring within a search query” and

“automatically generating a recommendation query including the identified term” as asserted by the Examiner in the rejection. App. Br. 11. Specifically the Appellants argue that the Examiner’s rejection cites “keywords” from a description of the problem being solved in Hirooka to read on the “term” of the identifying step and then cites “keywords” from the keyword vectors of the invention in Hirooka to read on the “term” of the generating step. *See* App. Br. 12 and Reply Br. 5-6. However, the claimed term of the identifying step and the generating step are the same. *Id.*

We agree with the Appellants. The Examiner relies upon this statement of Hirooka to read on the identifying step: “[i]n the case of a customer who has an interest in several categories, it is easy to image that he or she uses different keywords to search in different book categories” (Hirooka §3.3.1). Answer 9-10. The Examiner equates these “keywords” with the claimed terms occurring within a search query in the claimed identifying step. *Id.* While we agree with the Examiner that this statement in Hirooka does read on the claimed identifying step, Hirooka does not describe that *these* keywords are included when automatically generating a recommendation query (FF 3) nor has the Examiner shown that *these* keywords would inherently be included when automatically generating a recommendation query.

When addressing the generating step the Examiner states “[t]he keyword vector is a recommendation query and the results are the recommended listing” and then “[t]he identified terms of the reference are derived from search queries as well as other sources.” Answer 10. However, Hirooka explicitly describes that TwinFinder’s keyword in the keyword vectors are derived from “titles, authors, synopses, and sub-

categories of book purchases.” FF 5. Hirooka does not describe that keywords *in the keyword vector* are also the customers keywords discussed above.

In as much as the Examiner’s rejection may be implying that the customer’s keyword could possibly be the same as the keywords in TwinFinder (*see* Answer 4-6 and 9-10), for example if the customer possibly searched using the title of a book that was later purchased, we note that the rejection is based on anticipation.

A single prior art reference anticipates a patent claim if it expressly or inherently describes each and every limitation set forth in the patent claim. *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed.Cir.1987). Inherent anticipation requires that the missing descriptive material is “necessarily present,” not merely probably or possibly present, in the prior art. *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed.Cir.1999) (citing *Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed.Cir.1991)).

Trintec Industries, Inc V. Top-USA Corp., 295 F.3d 1292, 1295. “If it is necessary to reach beyond the boundaries of a single reference to provide missing disclosure of the claimed invention, the proper ground is not § 102 anticipation, but § 103 obviousness.” *Scripps Clinic & Research Found. v. Genentech, Inc.*, 927 F.2d 1565, 1577 (Fed. Cir. 1991)

We find that the Examiner has failed to establish a prima facie showing of anticipation. Accordingly, we find that the Appellants have shown that the Examiner erred in rejecting claim 1 and claims 2-20 and 29-30, dependent thereon, under § 102(b) as anticipated by Hirooka.

Claims 21-24

Claim 21 recites a system including “a database engine to identify a term associated with the user interaction in the network-based computer system, the identified term occurring within a search query, and automatically to generate a recommendation query including the identified term.” For the same reasons as discussed above, we find that the Examiner has not established a prima facie showing that Hirooka anticipates a system having a structure such that the engine performs the functions above. Accordingly, we find that the Appellants have shown that the Examiner erred in rejecting claim 21 and claims 22-24, dependent thereon, under § 102(b) as anticipated by Hirooka.

Claims 25-27

Claim 25 recites a machine-readable medium that includes instruction that cause a machine to perform the steps as issue in regards to claim 1. For the same reasons as discussed above, we find that the Examiner has not established a prima facie showing that Hirooka anticipates an article having instructions structured to cause a machine to perform the steps above. Accordingly, we find that the Appellants have shown that the Examiner erred in rejecting claim 25 and claims 26 and 27, dependent thereon, under § 102(b) as anticipated by Hirooka.

Claims 28

Claim 28 recites a system including “means for identifying a term associated with a user interaction in the network-based computer system, the identified term occurring with a search query” and “means for automatically

generating a recommendation query including the identified term.” For the same reasons as discussed above, we find that the Examiner has not established a prima facie showing that Hirooka anticipates a system having corresponding structure or equivalents to the claimed means above. Accordingly, we find that the Appellants have shown that the Examiner erred in rejecting claim 28 under § 102(b) as anticipated by Hirooka.

The rejection of claims 3, 12-20, and 22 under §103(a) as being unpatentable over Hirooka and Ryan.

The Appellants argue against the rejection of claims 3, 12-20, and 22 for the same reasons used to argue against the rejection of claims 1 and 21. (App. Br. 14-15). Accordingly, because we found them persuasive as to that rejection, we find them equally persuasive as to error in the rejection of claims 3, 12-20, and 22. We note that the Examiner did not cite Ryan to teach the limitations at issue in claims 1, 21, 25, and 28. *See* FF 6. We find that the Appellants have shown that the Examiner erred in rejecting claims 3, 12-20, and 22 under § 103(a) as unpatentable over Hirooka and Ryan.

NEW GROUND OF REJECTION

We enter a new ground of rejection under 37 C.F.R. § 41.50(b) on claims 13-20. We reject claims 13-20 under 35 U.S.C. § 112, second paragraph for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention. Claims 13-20 depend from claim 12 and therefore, inherit the ambiguity of claim 12 above, as describe in the rejection of claim 12 under § 112, 2nd paragraph on page 4 of the Answer.

CONCLUSIONS OF LAW

We conclude that the Appellants have not shown that the Examiner erred in rejecting:

claim 12 under 35 U.S.C. §112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention;

We conclude that the Appellants have shown that the Examiner erred in rejecting:

claims 1, 10, 21, 25, and 28 under 35 U.S.C. §112, second paragraph, as indefinite, for failing to particularly point out and distinctly claim the subject matter which applicants regards as the invention;

claims 1, 2, 4, 5-11, 21, and 23-30 under 35 U.S.C. §102(b) as anticipated by Hirooka;

claims 3, 12-20, and 22 under 35 U.S.C. §103(a) as unpatentable over Hirooka and Ryan; and

We enter a new grounds of rejection of claims 13-20 under 35 U.S.C. § 112, second paragraph.

DECISION

The decision of the Examiner to reject claims 1-11 and 13-30 is reversed and to reject claim 12 is affirmed. We enter a new ground of rejection under 37 C.F.R. 41.50(b).

This decision contains new grounds of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides “[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review.”

37 C.F.R. § 41.50(b) also provides that the appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

- (1) Reopen prosecution. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner
- (2) Request rehearing. Request that the proceeding be reheard under § 41.52 by the Board upon the same record

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED-IN-PART; 37 C.F.R. § 41.50(b)

mev

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